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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,922	04/02/2004	Hideki Tominaga	D-1587	9419

7590 03/22/2006  
KANESAKA BERNER AND PARTNERS  
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SUITE 310  
ALEXANDRIA, VA 22314

EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/815,922

Applicant(s)

TOMINAGA ET AL.

Examiner

Gail Verbitsky

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Attachment #1

### **DETAILED ACTION**

1. In light of arguments (December 06, 2005) presented by applicant at the Pre-Appeal Brief Conference (January 09, 2006), the finality of the previous office action (September 09, 2005) is hereby withdrawn and prosecution is now re-opened.

#### ***Claim Objections***

2. Claim 1 is finally objected to because of the following informalities: Perhaps applicant should replace the "wave limitation device" with the –wavelength limitation device—in order to have claim language consistent with the specification. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 are finally rejected under 35 U.S.C. 102(b) as being anticipated by Fontenot et al. (U.S. 5910816) [hereinafter Fontenot].

Fontenot discloses in Figs. 1, 7 a device/ assembly/ one image pickup device A for directing a visible (first wavelengths) and IR (second wavelengths) rays from a light diverging/ separating means 4 (or 84) and having a light receiving surface having two light receiving areas B and C at 90 degree to each other and comprising CCD chips 6 and 14 (plurality of two dimensionally arranged micro-photo-elements). An imaging lens directing light to said light receiving areas, wherein a first area B of the light receiving

surface is designated for first wavelengths (visible light) and a second area C is designated for second wavelengths (IR). The light diverging means comprises a prism 2 having two edges (two prism surfaces, thus, acting as two prisms), the edges (two prisms) are equipped with a (first) filter 4 to block IR and a (second) visible light blocking filter 14a, the filters 4 and 14a (or 90, 86) constituting a wavelength limitation means located in front of said areas of the image pickup device and directing said visible light and said IR to their respective first and second areas (col. 2, lines 65-67 and col. 3, lines 1-7). The device also comprises a display where the images corresponding the two wavelengths are recombined and displayed. This would imply, that the device comprising some means (processing electronics 8, 16/ temperature calculating means) for processing images and making them understandable for an operator in terms of at least IR/ thermal image, which is representative of temperature of the object of interest. (The numerals A-C have been added by the Examiner, see attachment # 1 to the Office Action).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-5 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Fontenot in view of Chen et al. (U.S. 20030227680) [hereinafter Chen].

Fontenot discloses the device as stated above.

Fontenot does not explicitly teach that the light diverging means includes a first polarizing beam splitter and a second polarizing beam splitter, as stated in claim 4 with the remaining limitations of claim 5.

Chen discloses a device comprising a first polarizing beam splitter and second polarizing beam splitter to receive and polarize different spectrum (wavelengths).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Fontenot, so as to have the first and second beam splitters, as taught by Chen, so as to effectively separate the spectrum, in order to provide more accurate results.

7. Claim 6 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Fontenot in view of JP 07246185 A [hereinafter JP].

Fontenot discloses the device as stated above.

Fontenot does not explicitly teach that the image pick up device is a (one) CCD camera, as stated in claim 6.

JP teaches that one CCD 19 can pick up both, IR and visible images/ light by using a rotatable color disc 12.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Fontenot, so as to have one CCD camera equipped with a disc, to image both, IR and visible images/ light, as taught by JP, so as to simplify the device disclosed by Fontenot.

8. Claim 1 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Taczak, Jr. (U.S. 3699339) [hereinafter Taczak] in view of Fontenot.

Taczak discloses in Fig. 1 one image pick up device comprising a light receiving surface having first and second areas 7. The surface of the one image device has a wave limitations device 5, 6 in front of each said areas. The device also has a light diverging means comprising a germanium filter 3 positioned to filter out 1.8 microns and allow 1.8 to 2.1 microns and 2.2 to 2.5 microns and, along with a shield 4, directing them towards the first and the second areas respectively.

Although Taczak states that the areas 7 are detectors of choice, Taczak does not explicitly state that they are two-dimensional photoreceptors, as stated in claim 1.

Taczak does not teach a calculation means.

Fontenot teaches a device in the field of applicant's endeavor wherein; the areas comprise photoreceptors arranged two-dimensionally. Fontenot teaches a calculation device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Taczak, so as to have the light receiving surface in the form of two dimensionally arranged photoreceptors, in order to provide video and thermal two dimensional images of the object of interest, as very well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a calculation means, as taught by Fontenot, to the device disclosed by Taczak, so as not only to have a visual video or thermal image, but also to provide the operator with a numerical data of the object's characteristics.

Harada discloses a device in the field of applicant's endeavor wherein, the one image pickup device comprises one CCD having first and second photosensing sections, which are separately, sense visible and infrared image

***Response to Arguments***

9. Applicant's arguments filed on December 06, 2005 have been fully considered but they are not persuasive.

Applicant states that the word "one" means "one" not "one or more" (claim 1). This is true, however, the word "one" does not mean "the only one". Therefore, the Applicant does not rule out that there could be another image pick up device. This would imply that, by claiming "one image pickup device", applicant does not limit the invention to a single pickup device. Even if so, in the present rejection using Fontenot, the Examiner considers that there is only one image pick up device.

Also, the "image pick up device" does not necessarily means a CCD camera. Thus, in the new rejection, the Examiner interprets Fontenot' s structure A as being a "one image pick up device" having two "light receiving surface areas" B and C as parts of the CCD chip 6 and the CCD chip 14 respectively. Please note, that according to Figs. 1 and 7 of Fontenot, all these elements are parts of the "one image pick up device" A.

Applicant states that Lee and Fontenot each employ two distinct detectors, while the present invention employs a single CCD sensor. This argument is not persuasive because this limitation is not stated in the claims. It is the claims that define the claimed

invention, and it is claims, not specification that are anticipated or unpatentable.

Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

With respect to Lee: the arguments are now moot.

### ***Conclusion***

**10. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV

  
Gail Verbitsky  
Primary Patent Examiner, TC 2800

March 07, 2006

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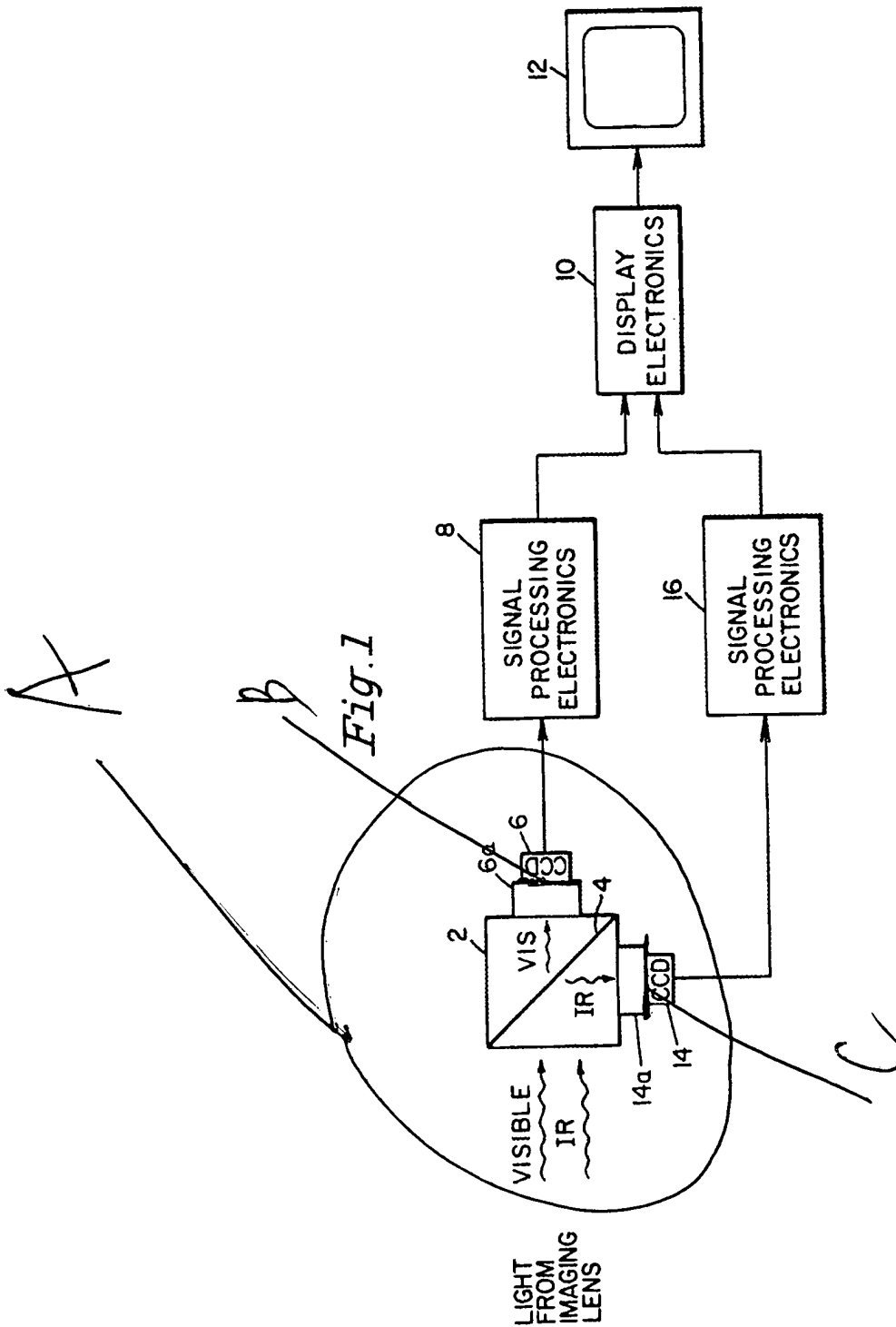
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U.S. Patent

Jun. 8, 1999

Sheet 1 of 7

5,910,816



attachment # 1  
(office action 03/07/06)